Northeastern Wisconsin Forest Health Update

Wisconsin DNR – Division of Forestry

May 17, 2016

Topics covered this month:

Insects:
EAB new finds in WI
Eastern tent caterpillar
Gypsy moth
Larch casebearer
Lecanium scale
Pine root collar weevil
Yellowheaded spruce sawfly

Diseases:
Annosum/HRD in Norway spruce
Slime mold

Other:
Cow damage

Of Historical Interest
25 years ago - 1991 –
Larch needlecast
Larch sawfly
50 years ago - 1966 –
A bark beetle
White grubs

Insects

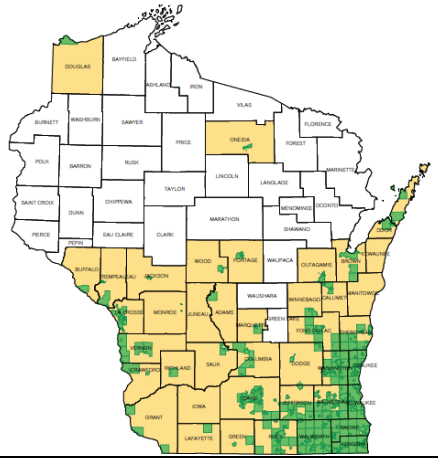
EAB new finds in WI - In the past month emerald ash borer has been identified in the following areas around the state:

<u>New County Quarantines:</u>

- none

<u>New finds in Counties already Quarantined:</u>

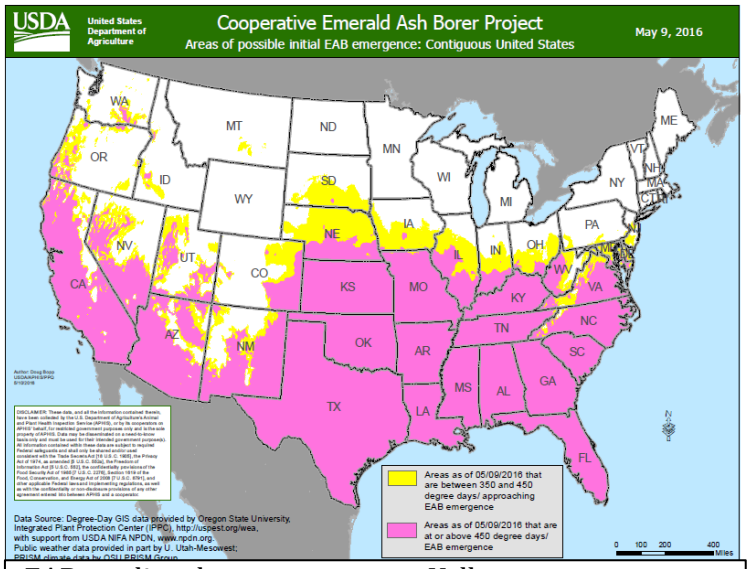
- Brown County – Towns of Glenmore and Morrison
- Calumet County – Town of Harrison
- Dane County – Town of Albion
- Fond du Lac County – Town of Byron
- Milwaukee County – Villages of Bayside and River Hills, City of Glendale



EAB has now been found in 37 counties in WI, and 41 counties are part of the EAB quarantine (shaded tan above).

- Racine County – Village of Wind Point
- Rock County – Towns of Beloit, Janesville, Porter, and Rock
- Waukesha County – Village of Dousman
- Wood County – City of Wisconsin Rapids**

**This was the first find of EAB in Wood County, which had previously been quarantined at the time that Portage County was quarantined.



EAB predicted emergence map. Yellow areas are areas approaching emergence. Pink are areas EAB is emerging.

EAB adults will soon begin emerging. Adults can emerge all summer long, at which time they will mate and lay eggs. Each adult female can lay 60-90 eggs.


Eastern tent caterpillar web nest.

Eastern tent caterpillar – tents are small right now. They're usually found in wild black cherry trees. Trees that are severely defoliated will send out a 2nd set of leaves in June. Crushing the caterpillars, or pulling the webs out of the tree are both good control options at this time of year. Pruning out the web nest is not necessary and has more of an impact to the tree than if you'd just left the caterpillars to defoliate it. Burning or torching the webs out of trees is NOT a good control option as it can kill portions of the tree, and it may start a wildfire.

Gypsy moth – gypsy moth caterpillars have hatched. When gypsy moth caterpillars first hatch they remain on the egg mass for a day or so before they disperse to the leaves. This egg mass that I was monitoring (right) hatched just before some cool/cold weather and they sat on the egg mass for 3 days. They also hatched well before the buds broke on this particular tree.


Gypsy moth 1st instar caterpillars on egg mass.

Aerial spraying for gypsy moth has begun in southwestern Wisconsin. DATCP's Slow The Spread (STS) Program has treatment blocks along the advancing edge of the gypsy moth population, which has marched westward across about ¾ of our state so far. The planes are spraying Foray 48B, which contains *Bacillus thuringiensis* var. *kurstaki* (Btk) which is specific to caterpillars, and is not toxic to people, bees, animals, birds, or plants. Foray 48B has also been approved for use in certified organic productions or food processing by the Organic Materials Review Institute. A spray progress chart and maps of spray sites can be viewed online at http://gypsymoth.wi.gov. For more information you can call the toll-free hotline 1-800-642-6684, and press 1. You also can get instant updates by connecting with DATCP on Twitter (http://twitter.com/widatcp) or Facebook

http://www.facebook.com/widatcp. If you would like updates automatically sent to your email, you can sign up at this link.

What can you do about gypsy moth? There is lots of info on the site http://gypsymoth.wi.gov/ including identification (gypsy moth and other caterpillars) and control options for both homeowners and woodland owners.

Larch casebearer – tamarack needles are flushing and expanding … and being eaten by larch casebearer in some areas. Two years ago we had significant wide-spread defoliation of tamarack, but last year the population of larch casebearer suddenly disappeared after several hard frost/freeze events in late May and early June. This year I have been able to find larch casebearer wherever I look, but so far I haven't found any really high populations. If you see areas of tamarack being heavily defoliated let your forest health specialist know. Defoliated tamarack will initially look pale, white/cream, or yellowish from a distance as the caterpillars mine out the needles, and later will turn brown. These defoliated trees usually send out a second set of needles in July after defoliation is done.

Larch casebearer caterpillar (brown cigar shaped thing attached to the needle).

Tamarack needles with feeding by larch casebearer.

Lecanium scale – populations appear to be quite high once again this year. In some areas this will be the 2nd year of high populations and branch dieback may begin to occur in trees that are already stressed by other factors. Scales are being found on many tree species including oak, maple, ash, cherry, dogwood, musclewood, and hazel, to name a few. Large populations of scale invariably means a lot of honeydew coating branches and leaves and anything sitting underneath those trees, like lawn furniture and vehicles.

Control in forest settings is usually left to nature. Ladybug larvae and other predators, as well as tiny parasitic wasps (1mm in size) and fungal diseases will attack the scales this summer. In some areas, particularly in Door and Kewaunee County, nearly half of the scales last year appeared to be infected with fungi, and additional scales are parasitized, although this still allowed enough to survive to create a large

The brown flat ovals scattered along the twig of this basswood are lecanium scales.

population this spring.

Yard trees can be sprayed to control the scale, although it's best to time it for when the crawlers are out moving around, which is usually mid- to late-June, into July. Systemic insecticides would work as well and can be applied in fall or spring to combat the scales. As always follow label directions and use products at the appropriate time, as some oils for scale control can burn foliage if applied at the wrong time. Homeowners that don't want to spray to control the scale may simply want to rinse off the honeydew from outdoor items on a regular basis as the stickiness can be unpleasant and can allow sooty mold to grow.

The white colored scales are male lecanium scales! This is really neat to see these as most people only see the females (brown one on the left). I found these on musclewood.

Pine Root Collar Weevil – Pine Root Collar Weevil damage was recently reported from Waupaca County and noted in Outagamie County. Pine root collar weevil can attack and kill all pines, although scotch, red, and jack pine are the most common hosts. You typically find pine root collar weevil attacking large sapling to small pole sized trees. Adult weevils lay their eggs at the base of the trees and the larvae bore under the bark and feed in the root collar area, effectively girdling the tree at the base. The soil and bark near the root collar becomes black and soaked with pitch. Larvae can be found in tunnels under the bark. Adult beetles are drawn to dark, cool, moist conditions. Tall grass or a deep duff layer around the base of the tree provides the perfect environmental conditions to attract these insects. Read more about pine root collar weevil.

Red pine tipped over due to pine root collar weevil damage at the base.

To limit the problems you'll have with Pine Root Collar Weevil there are several options.

1. When planting trees, avoid planting too deep
2. Prune lower branches and/or control grass competition to increase air flow.
3. Rake away duff from the base of the tree to create a drier and warmer root collar area, usually you'll only have to do this once.
4. Avoid planting red and jack pine within 1 mile of infested Scotch pine stands because Scotch pine is very attractive to this weevil.

Blackened area at the base indicates damage, and removing the bark revealed pine root collar weevil larvae.

5. Avoid mulching around these trees. Mulch creates dark, cool, humid environments.
6. Use an insecticide to kill adult weevils in the soil and root collar area.

Yellowheaded spruce sawfly – I have made several site visits recently in the Shawano, Waupaca, Outagamie County area, looking at young defoliated spruce. These spruce were defoliated last year by yellowheaded spruce sawfly, but apparently no one has really noticed until this spring. Last year I had some widely scattered reports/samples of yellowheaded spruce sawfly defoliation from Marinette, Door, and Vilas Counties. Some of those locations were in areas where spruce budworm was causing significant defoliation, but in the Shawano, Waupaca, Outagamie County area there was less spruce budworm.

Yellowheaded spruce sawfly larvae and feeding damage.

Yellowheaded spruce sawfly emerge in early June and will feed on all spruce, including Norway and blue spruce. They feed singly on the new needles and can cause significant defoliation although it is usually patchy or limited to just a few trees. They do not clip and web needles together like spruce budworm does. Spruce trees growing in full sunlight are preferred. Sawflies are not a true caterpillar so Btk products labeled for use on caterpillars do not work for these critters. General insecticides will need to be used about mid-June if you want to control them with pesticides. For more information check out the USFS document on Yellowheaded Spruce Sawfly.

Diseases

Annosum/HRD in Norway spruce – just a reminder that Annosum's common name is being transitioned to Heterobasidion Root Disease (HRD). Mark Guthmiller wrote an interesting piece in his latest pest update about finding HRD in a Norway spruce plantation, check it out. This Norway spruce stand isn't too far from the first white spruce plantation identified with HRD, which Mark also found and you can read about in his February 2016 update.

Jack pine gall rust – we have 2 native species of gall rust on jack pine in Wisconsin. Eastern Gall Rust, sometimes called Pine-Oak gall rust, is caused by the fungus *Cronartium quercuum* and needs oak as the alternate host to complete its life cycle. Western Gall Rust, sometimes called Pine-Pine gall rust, is caused by the fungus *Endocronartium harknessii* and does not require an alternate host. To the casual observer, you probably won't be able to tell the difference between the two. These gall

Jack pine gall rust oozing pycnial fluid.

rusts produce swellings on the branches and main stem of jack pine of any age. These galls will continue to grow for a number of years and are capable of girdling the branch or main stem. The photo above was taken mid-April in Vilas County, and shows the pycnial fluid oozing from the gall. Pycnia are just one of several types of spores that the fungus produces throughout its life cycle, including the more commonly seen orange powder on the galls when aeciospores are released.

How to manage for this disease. The galls on pine are capable of girdling the branches but often the branches will survive for many years with the gall continuing to grow in size as well. Seedlings with galls will probably not survive long, so be sure to examine seedlings before planting and cull any with galls. Older trees that are heavily galled can be removed at the time of a thinning. For trees in yards, pruning off the affected branches can make the tree more aesthetically pleasing.

Jack pine gall rust with orange powder, which is the aeciospores of the fungus.

Slime mold – it's that time of year. The time when I often get a few emails showing pink, orange, or bright yellow "slimy stuff" on the bark of trees. These colorful spots are either slime molds or yeast organisms which create the lovely colors. Not to worry, it doesn't damage or harm the tree. Slime molds grow on areas of old sapflow from old wounds. The old wounds could be an old branch stub, woodpecker damage, insect boring, etc. As the sap has flowed down the stem at some point in the past, sugars are left behind, prompting growth of bacteria which the mold later feeds on. The color will fade as the season goes on, but it will probably make an appearance next spring if we have moisture at the right times. No need to do anything, no need to cut down the tree, no need to scrub or spray the tree.

A yellow slime mold on a stump. Photo by Lee Klaus.

Slime mold on tree. Photo by Dave VanderVelden.

Other/Misc.

Cow damage – what happens when you turn cattle out in a balsam fir plantation? This picture shows happy cows and sad trees. You can see on the right side of the photo below that many balsam fir have died. On the left in the background you can see a lot of grey and some brown, which are already dead, or recently dead balsam fir. The cattle strip the bark off the trees, effectively girdling them. Horses, goats, pigs, and other animals can do similar damage. You may be wondering why the spruce in the foreground isn't dead … that's because the fence is attached to the tree so the cattle can't easily access it without touching the fence.

Of Historical Interest

25 years ago, in 1991 –

- **Larch Needlecast** - *Mycosphaerella laricina* (Hartig) Neg. This disease was severe on a 10-acre planting of European larch in Lorain Township, Polk County (Section 32, T37N, Rl5W). Affected trees were bright orange in mid-August from needle discoloration, and were completely defoliated by mid-September.
- **Larch Sawfly** - *Pristiphora erichsonii* (Hartig). Populations increased in the northeastern counties. Small stands of scattered larch were heavily defoliated in Langlade, Oneida and Vilas counties. In northwestern counties, populations decreased and defoliation was uncommon.

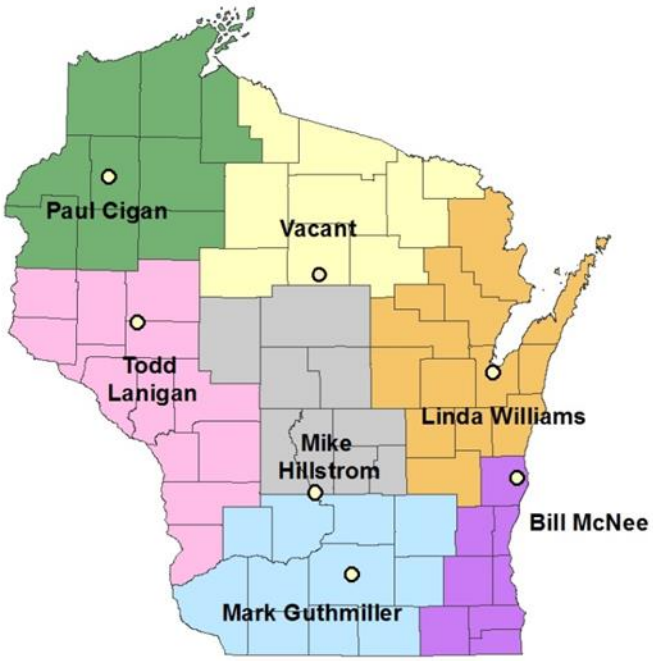
50 years ago, in 1966 –

- **A Bark Beetle** - *Pityogenes hokinsi* Sw. Drought-damaged white pine, trees in heavily thinned stands, and trees adjacent to white pine brush piles were most frequently attacked in the East Central Area. The insect appears to be an initial invader where trees have been attacked by blister rust. Attack is often followed by Ips beetles and Zimmerman pine moth when fruiting of the fungus occurs.
- **White Grubs** - *Phyllophaga* sp. Little damage was reported in Northwest Area plantations. However, many reports of damage to lawns in the Spooner area (Washburn County), as well as to turf on the local golf course, indicated a very high population of grubs. The baseball field at Interstate Park (Polk County) was severely damaged by raccoons which were observed digging for grubs. It is expected that subsequent inspection of recent Northwest Area plantings will reveal considerable grub damage. Defoliation by adult beetles was severe in parts of Oconto County, especially section 34, T31N, Rl7E. Aspen and scrub oak were most severely defoliated. Less than 10 percent mortality was observed in scattered West Central Area plantings examined. No significant damage was reported. A planting site in Manitowoc County in the East Central Area supported a large population of grubs, but apparently most feeding occurred on plants other than the tree seedlings. Elsewhere little damage was reported.

Contact Us

Forest Health Staff - contact info for each Forest Health Specialist can be found our webpage at http://dnr.wi.gov/topic/ForestHealth/staff.html

Vacancy area coverage:
Oneida, Vilas, Forest, Florence Co's – Linda Williams
Lincoln, Langlade Co's – Mike Hillstrom
Price, Taylor Co's – Todd Lanigan
Iron County – Paul Cigan



Report EAB:
by phone 1-800-462-2803
by email DATCPEmeraldAshBorer@wisconsin.gov
visit the website http://emeraldashborer.wi.gov/

Report Gypsy Moth:
by phone at 1-800-642-6684
by email

dnrfrgypsymoth@wisconsin.gov

visit the website http://www.gypsymoth.wi.gov/

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Note: This pest update covers forest health issues occurring in Northeastern Wisconsin. This informal newsletter is created to provide up-to-date information to foresters, landowners, and others on forest health issues. If you have insect or disease issues to report in areas other than northeastern Wisconsin please report them to your local extension agent, state entomologist or pathologist, or area forest pest specialist.